

## **ABSTRACT OF THE DISCLOSURE**

Systems and methods are described for a shared as needed programming model. A method includes: interconnecting a compute node with a shared memory node via hardware over a link medium; and providing a shared memory operating system extension layer. An apparatus, includes: a compute node; a link medium coupled to the compute node; and a shared memory node coupled to the link medium, the shared memory mode including a shared memory operating system extension layer.

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